

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

## THE WATER SHREWS OF THE LABRADOR PENINSULA\*

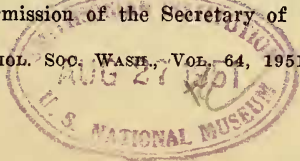
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The American water shrews of the species *Sorex palustris* are rare in collections of mammals from the Labrador Peninsula, which includes Labrador proper and the part of Quebec that lies between Hudson Bay and the Gulf of St. Lawrence. Including those newly recorded here, I know of 10 specimens from seven different localities in this entire area of about 175,000 square miles. They are scattered in four collections, and the six specimens that have received previous notice have been variously assigned to the subspecies *albibarbis*, *gloveralleni*, and *labradorensis*. Specimens in the collection of the Carnegie Museum, Pittsburgh, have been loaned for study through the courtesy of J. Kenneth Douthett, and C. F. Jackson of the University of New Hampshire has similarly loaned specimens from his collection.

All previously published records from the Labrador Peninsula represent localities along the northern shore of the Gulf of St. Lawrence. It now appears that the species is distributed over the entire peninsula, except possibly the most barren part of northern Ungava. The Labrador area has been less studied by mammalogists than other parts of North America, but it is still remarkable that so few water shrews have been collected. Fort Chimo is perhaps the best known collecting locality in the area; numerous specimens of mammals were taken there nearly seventy years ago by L. M. Turner and at later dates by other collectors, but it was not until 1947 that water shrews were caught.

There is little available information concerning the natural history and preferred habitat of the shrews. The two Fort Chimo specimens were caught, along with numerous *Sorex cinereus cinereus* and *Microtus pennsylvanicus labradorius*, in the small area of meadow-like grassland that surrounds the Hudson's Bay Company post buildings. This locality is approximately at the northern limit of tree growth, where small patches of stunted spruce and larch trees are surrounded by tundra and muskeg. Cartwright and Red Bay are in the treeless strip of country bordering the Labrador coast, and the remaining localities are in or bordering spruce-forest areas. There is no apparent altitudinal restriction; most of the specimens were taken near sea level, and the one from Astray Lake was on the height-of-land on the main divide of the peninsula. Labels of three of the specimens bear the following collector's notations:

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"Rare and seldom seen; picked up dead on the road" (E. Doane at Cartwright); "Run in sphagnum and reindeer moss in spruce thicket. Bottom of gully" (H. W. Jackson at Point St. Charles); "Damp gully in cliff, very wet and cold" (H. W. Jackson at Seal River). These shrews are apparently less restricted to a streamside habitat than is *Sorex palustris navigator* in the relatively arid mountains of western North America.

Study of the available specimens indicates that there are three subspecies of *Sorex palustris* on the Labrador Peninsula, one of which has not been previously described.

***Sorex palustris turneri*, new subspecies**

*Type locality*.—Fort Chimo (on the eastern bank of the Koksoak River, lat. 58° 8' N., long. 68° 15' W.), Ungava district, Quebec, Canada.

*Type specimen*.—U. S. National Museum No. 282879; skin and skull, adult male in summer pelage; collected October 4, 1947, by Maj. Robert Traub and Sgt. Donald Koelle; prepared by D. H. Johnson, original number 5216.

*Characters*.—Upperparts in summer pelage Fuscous-Black (this and other capitalized color terms after Ridgway, 1912), darker than in any of the described races of *Sorex palustris* except possibly *brooksi* of Vancouver Island; belly Mouse Gray; underparts in general, including underside of tail and inner sides of feet, paler than in *labradorensis*, *albibarbis*, and *hydrobadistes*, darker than in *gloveralleni*, *palustris*, and *navigator*; underparts less suffused with brownish color than in any of the foregoing races except *palustris*; tail bicolored almost to tip. Winter pelage unknown. Skull small, with relatively weak rostrum and broad braincase. For measurements see Table I.

*Remarks*.—Of all the races of *Sorex palustris* described from eastern North America, this one is outstanding for the reduction of the amount of brown pigment visible in the summer pelage. With the unusually dark upperparts, this produces a distinctive black-and-gray appearance. The darkened skin on the back of each specimen indicates that molt to winter pelage would take place shortly after October 4, the date on which they were collected.

The nearest relative, both geographically and in point of characters, is *S. p. labradorensis*, and intergradation is presumed to take place with that race. There is, however, a gap of 400 or more miles from which no specimens are available between the nearest localities of the two races.

This race was discovered in the course of a survey of small mammals and their ectoparasites occurring about air bases in northeastern North America conducted by the Army Medical Service Graduate School and the Smithsonian Institution in the autumn of 1947. It is named in honor of Lucien McShan Turner, who in 1882 and 1883, while attached to the U. S. Signal Service, made the first important collection of mammals in the Ungava region.

*Specimens examined*.—Two, from the type locality (U. S. Nat. Mus. Nos. 282879 and 282880, skins and skulls).

*Sorex palustris labradorensis* Burt

*Sorex palustris labradorensis* Burt, Occas. Papers Mus. Zool. Univ. Michi-

gan, No. 383, p. 1. August 27, 1938.

*Type locality*.—Red Bay, Strait of Belle Isle, Labrador.

*Type specimen*.—Univ. Michigan Mus. Zool., No. 68109; skin and skull, adult female in winter pelage; collected February 9, 1933, by E. Doane (Burt, 1938).

*Characters*.—Color in summer pelage (based on specimens from Astray Lake and Cartwright): Upperparts between Fuscous and Fuscous-Black, with a scattering of brownish hair tips; underparts near Hair Brown, slightly paler on throat; pale area on underside of tail indistinct beyond proximal third. In winter pelage (as described by Burt, 1938, p. 2): "Upperparts fuscous black, underparts silver gray. . . Tail bicolor, black above with whitish ventral stripe extending about three-fourths distance to tip." For measurements, see Table I.

*Remarks*.—Burt considered *labradorensis* a small race because the skull of the type has a condylobasal length of only 19.7 mm., but a specimen of the same sex from nearby Cartwright is larger, with a condylobasal length of 20.4 mm.

*Records of occurrence*.—Three localities are represented:

Cartwright, Labrador (on the coast south of Hamilton Inlet, lat. 53° 48' N., long. 56° 59' W.). One specimen examined (Carnegie Mus. No. 17981, skin and skull).

Red Bay, Labrador (on the Strait of Belle Isle, lat. 51° 45' N., long. 56° 24' W.). Type specimen of *labradorensis*, recorded by Burt (1938, p. 1).

Astray Lake, Quebec ("on the height of land between Ste. Margaret River and Swampy Bay River," approximate lat. 53° N., long. 67° W.). One specimen examined (Carnegie Mus. No. 4103, skin only).

#### *Sorex palustris gloveralleni* Jackson

*Neosorex palustris acadicus* G. M. Allen, Proc. Biol. Soc. Washington, vol. 28, p. 15. February 12, 1915. (Name preoccupied by *Sorex acadicus* Gilpin 1867).

*Sorex palustris gloveralleni* H. H. T. Jackson, Jour. Mammalogy, vol. 7, p. 57. February 15, 1926. (Renaming of *acadicus* Allen.)

*Type locality*.—Digby, Nova Scotia.

*Type specimen*.—Bangs Collection, Museum of Comparative Zoology, No. 2046; skin and skull, adult female; collected July 26, 1894, by Outram Bangs.

*Characters*.—Color in summer pelage (based on specimens from Point St. Charles and Seal River): Upperparts near Fuscous-Black; underparts Light Drab; pale area on underside of tail extending completely to tip. Skull about as in *albibarbis* and *labradorensis*, smaller than in *palustris*.

*Remarks*.—In the pale underparts and the well marked light streak extending to the tip on the underside of the tail, the specimens from the northern shore of the Gulf of St. Lawrence resemble both *palustris* and *gloveralleni* and are sharply distinct from the other, darker-bellied, eastern races. In their small size (see Table I for measurements) they resemble *gloveralleni* rather than *palustris*. The three specimens from Godbout have been in alcohol for many years and as a result their colors

are badly faded. One of these is in winter pelage and has very pale underparts; the other two are in summer pelage and have far more contrast in color between the dorsal and ventral color areas than exists in skins of *albibarbis*. They were considered intermediate between *gloveralleni* and *albibarbis* and tentatively referred to the latter race by H. H. T. Jackson (1928, p. 182). The Seal River and Point St. Charles specimens were correctly identified as *gloveralleni* by C. F. Jackson (1938, pp. 431-432), and, with the presence of this race definitely established north of the St. Lawrence, the specimens from Godbout are best included under it.

*Records of occurrence.*—The following five specimens have been examined from the Labrador Peninsula:

- Point St. Charles and Seal River, Quebec (vicinity of Moisie River on the Gulf of St. Lawrence, approximate lat. 50° 20' N., long. 66° W.). Two specimens (C. F. Jackson Coll. Nos. 373 and 374, skins and skulls); previously recorded by C. F. Jackson (1938, p. 342).  
 Godbout, Quebec (on the Gulf of St. Lawrence, lat. 49° 19' N., long. 67° 37' W.). Three specimens examined (U. S. Nat. Mus. Nos. 74651, 99185, and 178503, all alcoholics with skulls removed and cleaned); previously recorded by H. H. T. Jackson (1928, p. 183) as *S. p. albibarbis*.

## LITERATURE CITED

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TABLE I. Specimens and measurements in millimeters of *Sorex palustris* from the Labrador Peninsula<sup>1</sup>

Specimen	Locality	Date and Collector	Head and Body					Ear	Condylbasal length	Palatal length	Cranial breadth	Interorbital breadth	Maxillary breadth	Maxillary toothrow
			Head	Tail	Hind foot	Ear	Condylbasal length							
U.S.N.M., 282879, ♂ <i>turneri</i> (type)	Fort Chimo, Ungava	Oct. 4, 1947 Traub & Koelle	80	73	19	6	19.6	8.4	9.8	4.0	5.7	7.5		
U.S.N.M., 282880, ♀ <i>turneri</i>	Fort Chimo, Ungava	Oct. 4, 1947 Traub & Koelle	80	69	18	8	19.1	8.0	10.1	4.0	---	7.4		
Carnegie, 4103, ♀ <sup>2</sup> <i>labradorensis</i>	Astray Lake, Quebec	Aug. 1, 1917 O. J. Murie	---	---	---	---	---	---	---	---	---	---		
Carnegie, 17981, ♀ <i>labradorensis</i>	Cartwright, Labrador	Aug. 27, 1939 E. Doane	80	75	20	8	20.4	8.4	9.9	3.9	5.8	7.7		
Univ. Mich., 68109, ♀ <sup>2</sup> <i>labradorensis</i> (type)	Red Bay, Labrador	Feb. 9, 1933 E. Doane	75	71	20	---	19.7	8.6	9.7	4.4	5.9	7.7		
Jackson Coll., 373 ♀ <i>gloveralleni</i>	Pt. St. Charles, Quebec	Aug. 26, 1937 H. W. Jackson	97 <sup>3</sup>	77	20	---	20.6	8.4	---	4.1	6.0	7.7		
Jackson Coll., 374 ♂ <i>gloveralleni</i>	Seal River, Quebec	Sept. 3, 1937 H. W. Jackson	81	73	20	---	20.6	8.8	10.0	3.8	6.5	7.6		
U.S.N.M., 74651, ♂ <sup>4</sup> <i>gloveralleni</i>	Godbout, Quebec	July 29, 1895 N. A. Comeau	---	74	21	7	---	8.1	---	4.0	6.5	7.6		
U.S.N.M., 99185 <sup>4</sup> <i>gloveralleni</i>	Godbout, Quebec	June 12, 1899 N. A. Comeau	---	75	20	7	19.8	8.3	9.7	3.8	---	7.5		
U.S.N.M., 178503 <sup>4</sup> <i>gloveralleni</i>	Godbout, Quebec	Aug. 27, 1898 N. A. Comeau	---	69	21	7	19.9	8.2	9.7	3.8	5.6	7.6		

<sup>1</sup>External measurements from specimen labels; cranial measurements as described by H. H. T. Jackson (1928, p. 13)<sup>2</sup>Measurements as given by Burt (1938, p. 1)<sup>3</sup>This is evidently an error<sup>4</sup>External measurements from specimen in alcohol